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PERINATAL DEATH STUDY

STATISTICAL REPORT FOR THE SIXTH YEAR OF THE STUDY

1959

MATERNAL AND CHILD WELFARE COMMITTEE

of the

MONTANA MEDICAL ASSOCIATION

and

MONTANA STATE BOARD OF HEALTH

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I N T R O D U C T I O N

This is the sixth annual report on the Perinatal Death Study conducted by the Maternal and Child Welfare Committee of the Montana Medical Association and the Montana State Board of Health.

The aims of this Study are to determine the etiological factors producing fetal and neonatal deaths, to evaluate each death as to whether it was preventable or not, and to make recommendations so that in the future our mortality rates may be further lowered. Actual causes of and contributing factors responsible for death are analyzed.

Information for this report has been compiled from answers to questionnaires sent to physicians by the Maternal and Child Welfare Committee of the Montana Medical Association. Gratitude is extended to this department for their cooperation and aid in preparing this report.

Questionnaires on fetal and neonatal deaths were sent to all physicians who signed the perinatal death certificates. The completed and returned questionnaires were then coded for the IBM machine and were then carefully reviewed by subcommittees of the Maternal and Child Welfare Committee. During these discussions, no means of identification of the patient or the attending physician was made possible. Only code numbers remained on the questionnaire sheets. The comments or suggestions of the Committee were recorded and returned to the reporting physician.

The Committee is grateful for the steady rise in the percentage of completed and returned questionnaires. It indicates an increasing interest in this study by the practicing physician. It is hoped that this improvement in reporting will continue so that this perinatal death study will be of increasing accuracy and value.

The Committee feels it important that all questions be answered as completely as possible. The members find it particularly difficult to evaluate and classify a case adequately when some of the more pertinent questions are left blank.

The Maternal and Child Welfare Committee of the Montana Medical Association and the Montana State Board of Health wish to express their appreciation to the practicing physicians of Montana for their cooperation in making this study possible.

REPORT ON

THE 1959 PERINATAL DEATH STUDY

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Part A

PURPOSE OF STUDY

As stated in the introduction, this analysis of perinatal deaths is made from a study of the questionnaires returned by individual doctors in response to request by the Maternal and Child Welfare Committee. It is the purpose of such a study to inform those doing obstetrics as to State and local factors in such mortality. By going into details as to cause of death, the areas for improvement may be indicated.

In spite of the marked reduction in general mortality rates, the neonatal death rate has not declined nationally and, in the last year or two, has been on the rise. Improvement in this death rate is dependent upon improved prenatal care, better methods of delivery, and meticulous care of the off-spring.

The objective of this report may be summed up in the words of the Committee on Maternal and Child care of the AMA: "The objective of perinatal mortality and morbidity studies is to improve the production of normal human beings. The elimination of deaths and damage during the process of reproduction is the ideal for which we should strive. In working toward the objective with this ideal in mind, all individuals and committees should rigidly and courteously adhere to scientific and ethical principles."

Part B

DEFINITION OF TERMS

The material for this study was obtained from the information contained in 356 questionnaires, of which 159 concerned fetal death, and 197 concerned neonatal death. There were 223 fetal and 294 neonatal deaths. Therefore, 71.7%, and 67%, respectively, of the questionnaires were returned for analysis. The total perinatal death rate was 29.3 per 1,000 live births.

This study is concerned with an analysis of the PERINATAL DEATH RATE, which may be divided into a FETAL DEATH RATE AND a NEONATAL DEATH RATE. Fetal death, or stillborn can be defined as a death occurring before expulsion of the fetus of more than 20 weeks gestation. Neonatal pertains to death occurring in the first four weeks of life. This division is necessary in order to determine and analyze the causes of death.

The accompanying tables and graphs are an analysis of the perinatal deaths in the State of Montana for 1959.

Part C

ANALYSIS OF FETAL DEATHS

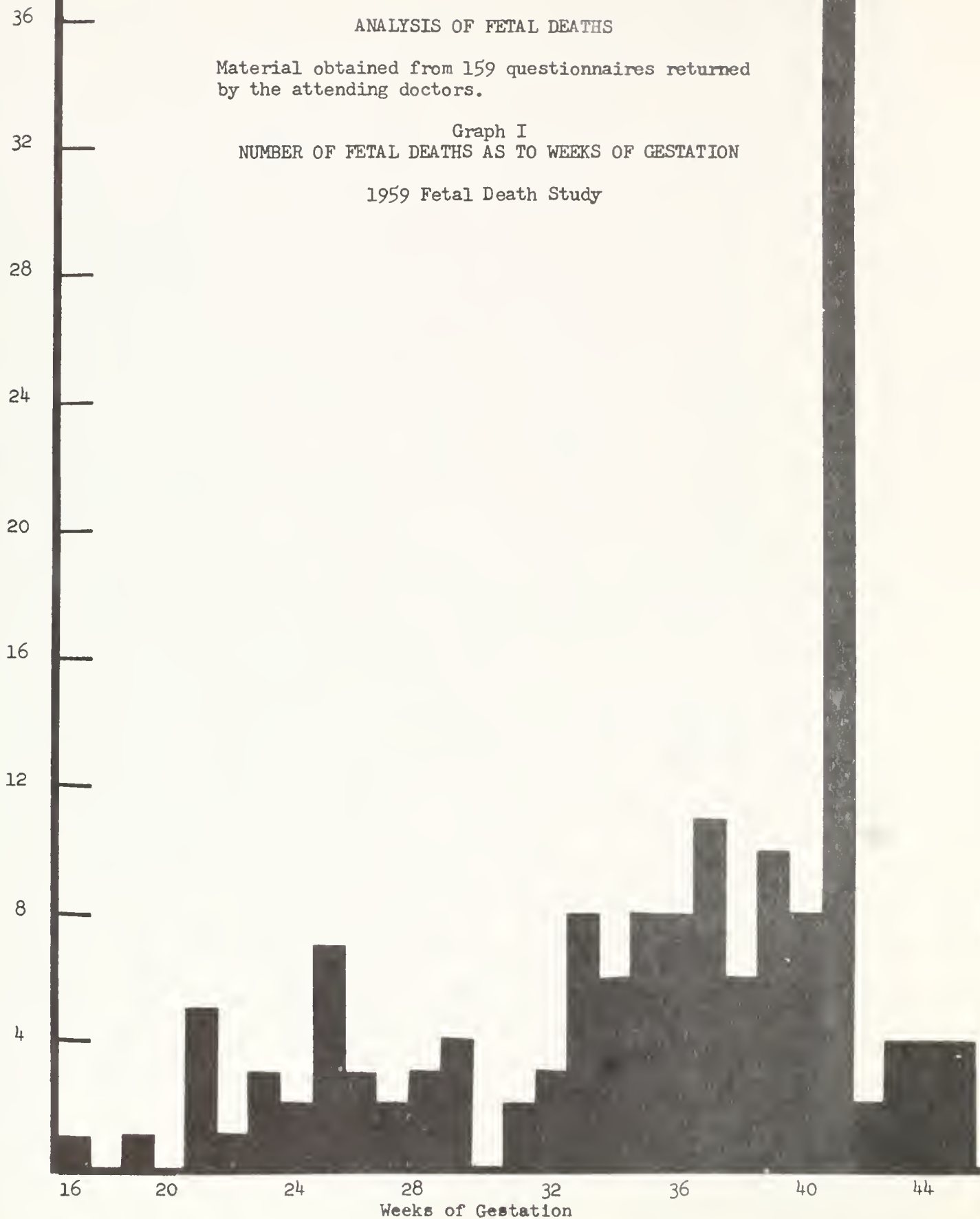
Material obtained from 159 questionnaires returned
by the attending doctors.

Graph I

NUMBER OF FETAL DEATHS AS TO WEEKS OF GESTATION

1959 Fetal Death Study

Number of Fetal Deaths



2. Birth weight and its relationship to fetal death.

As the present definition of prematurity refers to birth weight, rather than length of gestation, the accompanying graph shows the relationship between weight of fetus and death.

Graph II

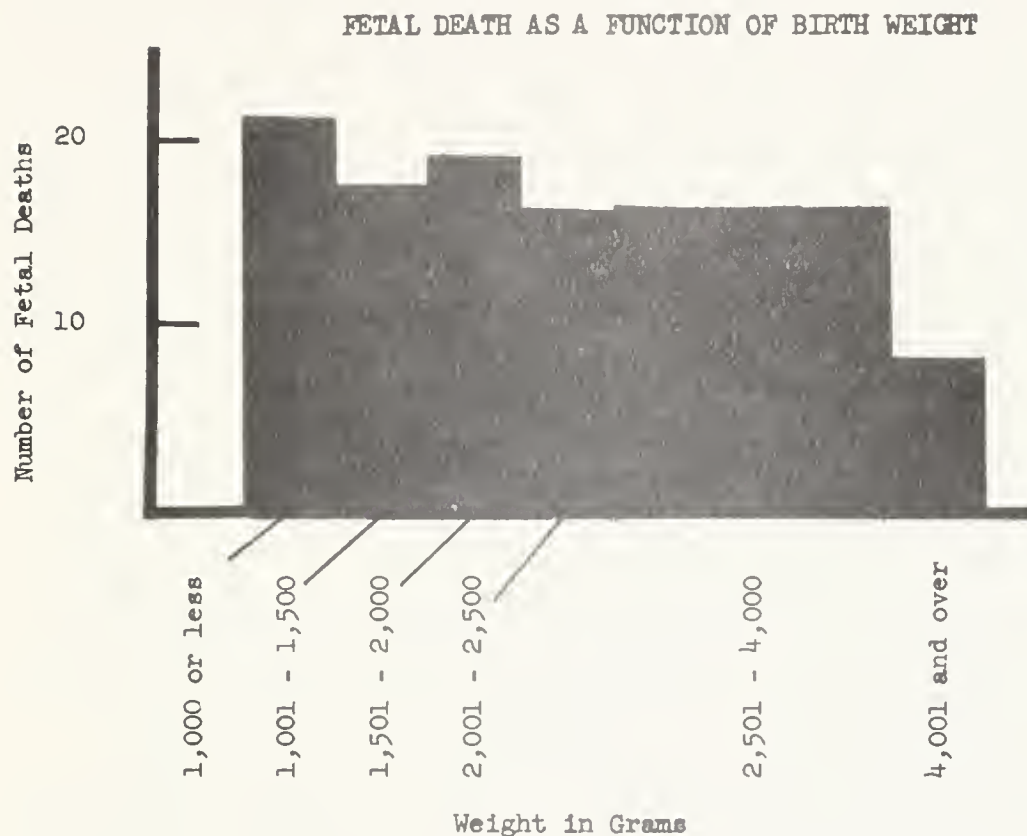


TABLE I

<u>Weight</u>		<u>Number</u>
TOTAL		159
(Metric)	(English)	
Under 1,000 gms.	2 lbs. - 3 ozs.	21
1,001 - 1,500 gms.	2 lbs. - 4 ozs. to 3 lbs. - 4 ozs.	17
1,501 - 2,000 gms.	3 lbs. - 5 ozs. to 4 lbs. - 6 ozs.	19
2,001 - 2,500 gms.	4 lbs. - 7 ozs. to 5 lbs. - 8 ozs.	16
2,501 - 4,000 gms.	5 lbs. - 9 ozs. to 8 lbs. - 14 ozs.	49
4,000 and over	8 lbs. - 14 ozs. +	8
Weight not stated		29

Graph III

RATIO OF FETAL DEATHS PER 1,000
LIVE BIRTHS TO AGE OF MOTHER

1959 Fetal Death Study

3. Effect of age of mother
on fetal death rate

The accompanying graph and table relate fetal death to age of mother by reducing to the common denominator of fetal deaths per 1,000 live births.

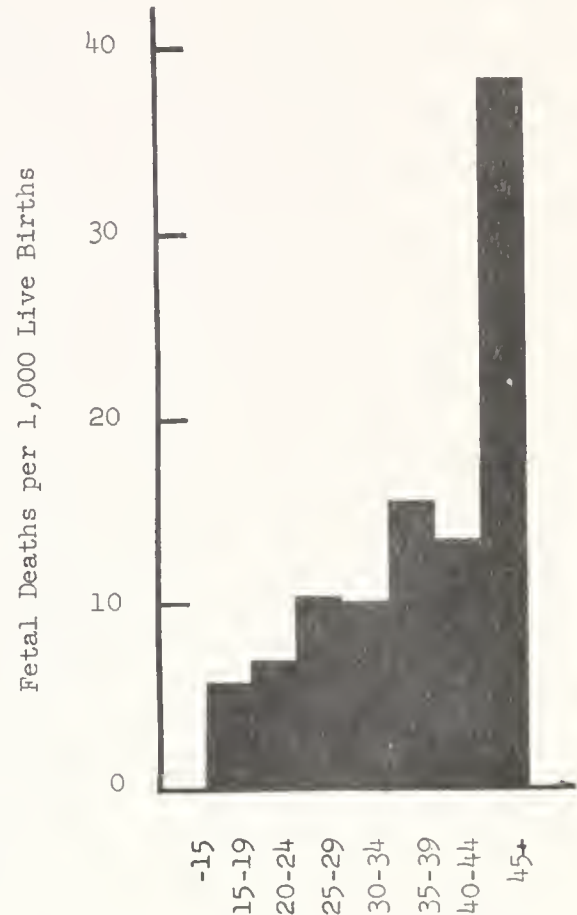


TABLE 2 - Maternal age, births and fetal deaths - 1959***

<u>Age Groups</u>	<u>Number</u>	<u>Deaths</u>	<u>Rate*</u>
TOTAL	17,448	159	9.1
Under 15	51	0	0.0**
15 - 19	2,434	14	5.8
20 - 24	6,216	43	6.9
25 - 29	4,270	44	10.3
30 - 34	2,577	26	10.1
35 - 39	1,416	22	15.5
40 - 44	449	6	13.4**
45 or over	26	1	38.5**
Age not stated	9	3	333.3**

* Fetal deaths per 1,000 live births

** Rate based on less than 1,000 live births

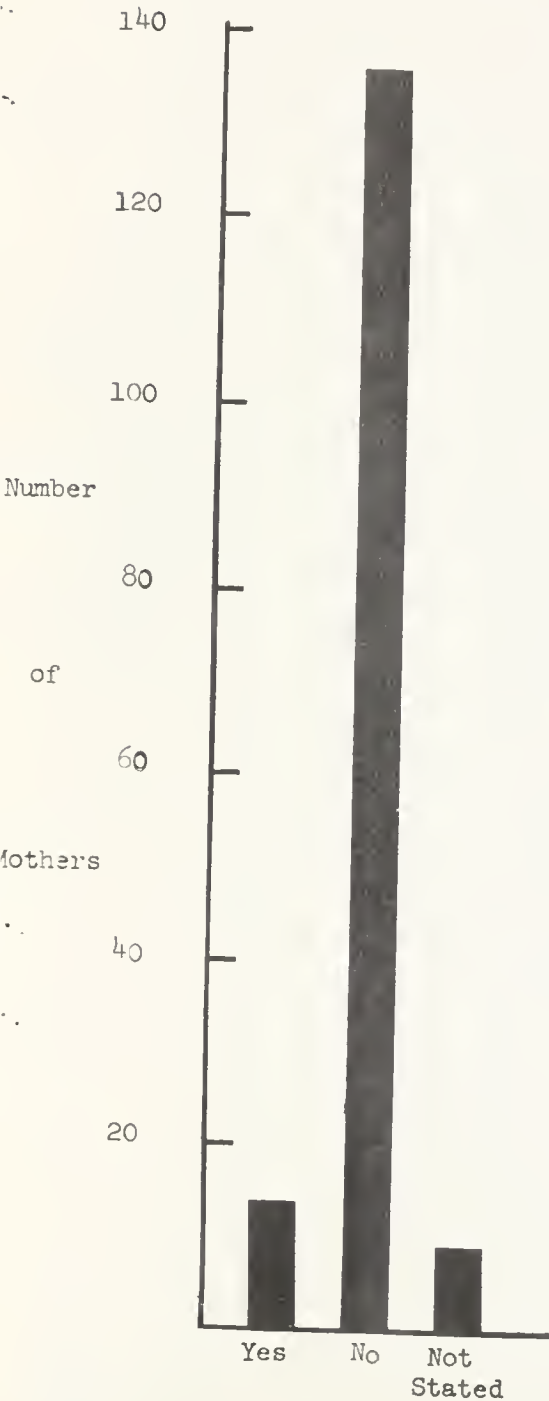
*** Since questionnaires were returned only for fetal deaths which occurred in Montana, the base chosen for calculating these ratios is the number of live births by place of occurrence.

4. Early Threatened Abortion

8.8% of mothers had suffered a threatened abortion early in this pregnancy.

Graph IV

EARLY THREATENED ABORTION
THIS PREGNANCY
1959 Fetal Death Study

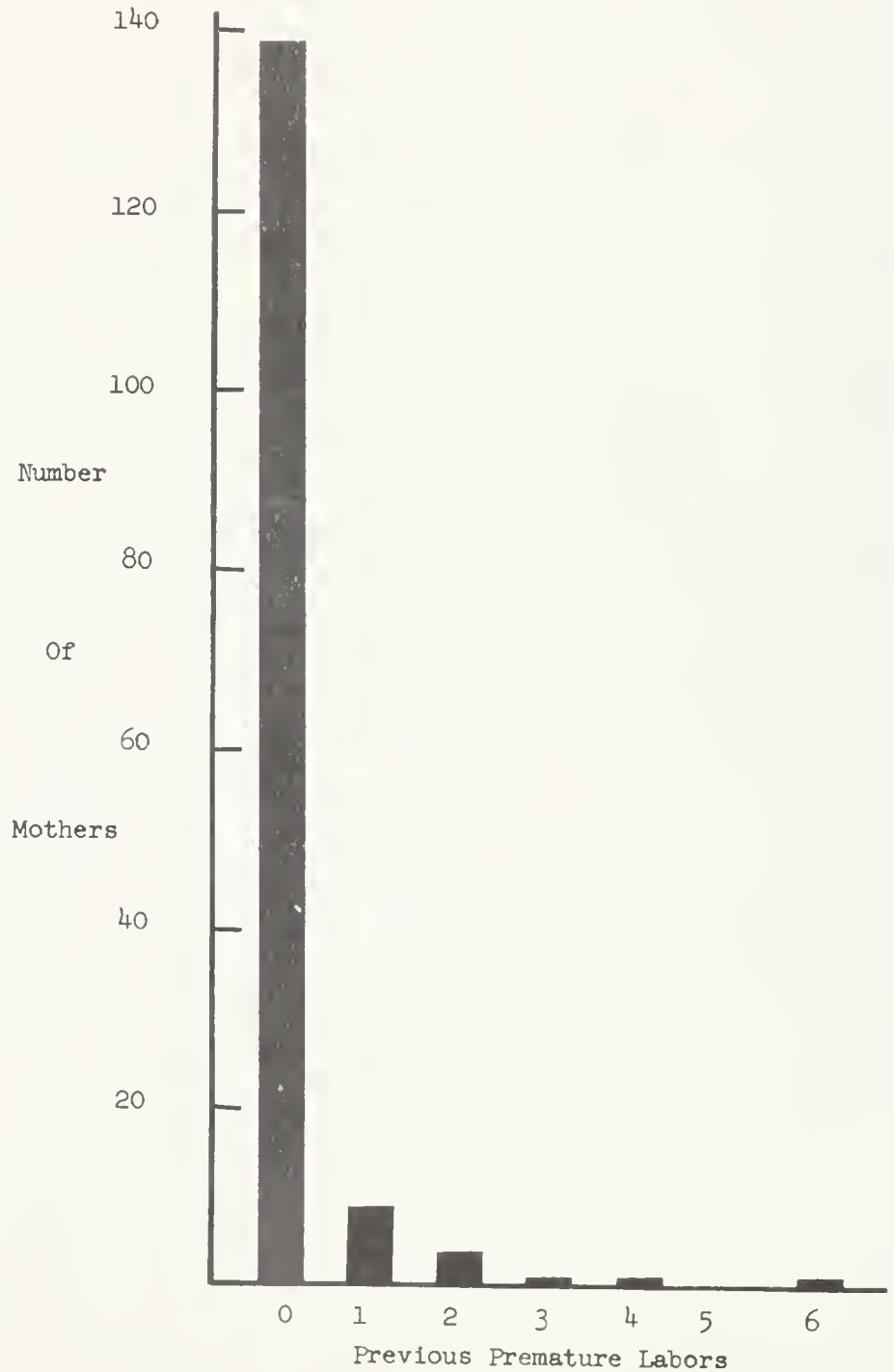


5. Previous Premature Labors

9.8% of the mothers had a previous premature labor

Graph V

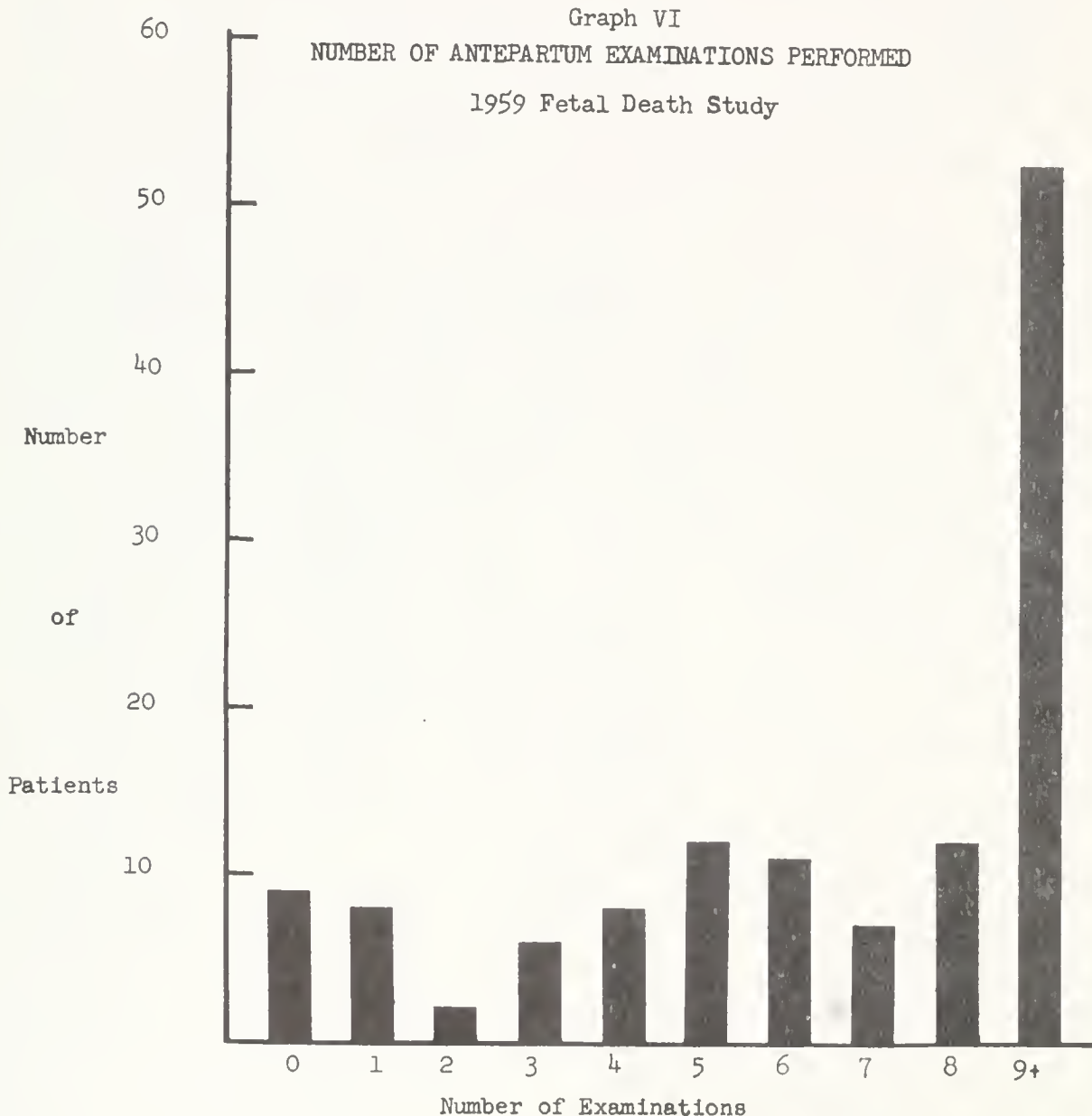
PREVIOUS PREMATURE LABORS
1959 Fetal Death Study



6. Number of antepartum examinations in the cases of fetal death

This table depicts that a large percentage of mothers whose pregnancies resulted in fetal deaths did not avail themselves of adequate prenatal care. Further education of the lay public regarding proper care of the pregnant woman is essential. The majority of the patients who had up to five prenatal examinations did not apply for care until the late months of pregnancy.

We have no knowledge of the amount of care received by 30 out of the 159 cases reported. The Committee urges that the laity be offered more educational advantages so they will see their physicians during the early months of pregnancy, thus ensuring them of much better obstetric care.



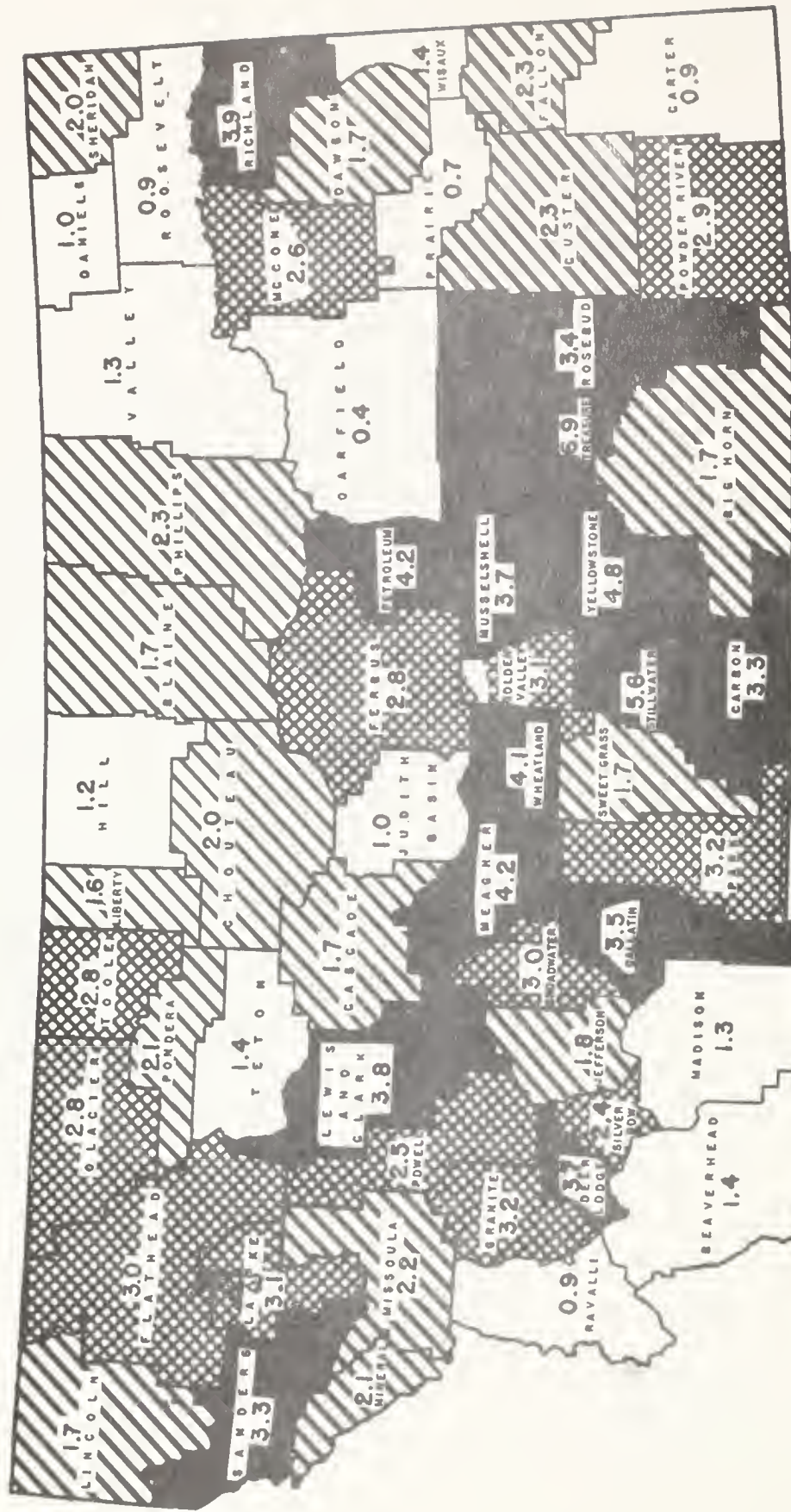
PERCENTAGE OF CESAREAN SECTION AND VERSIONS
BY PLACE OF RESIDENCE

1955 - 1959

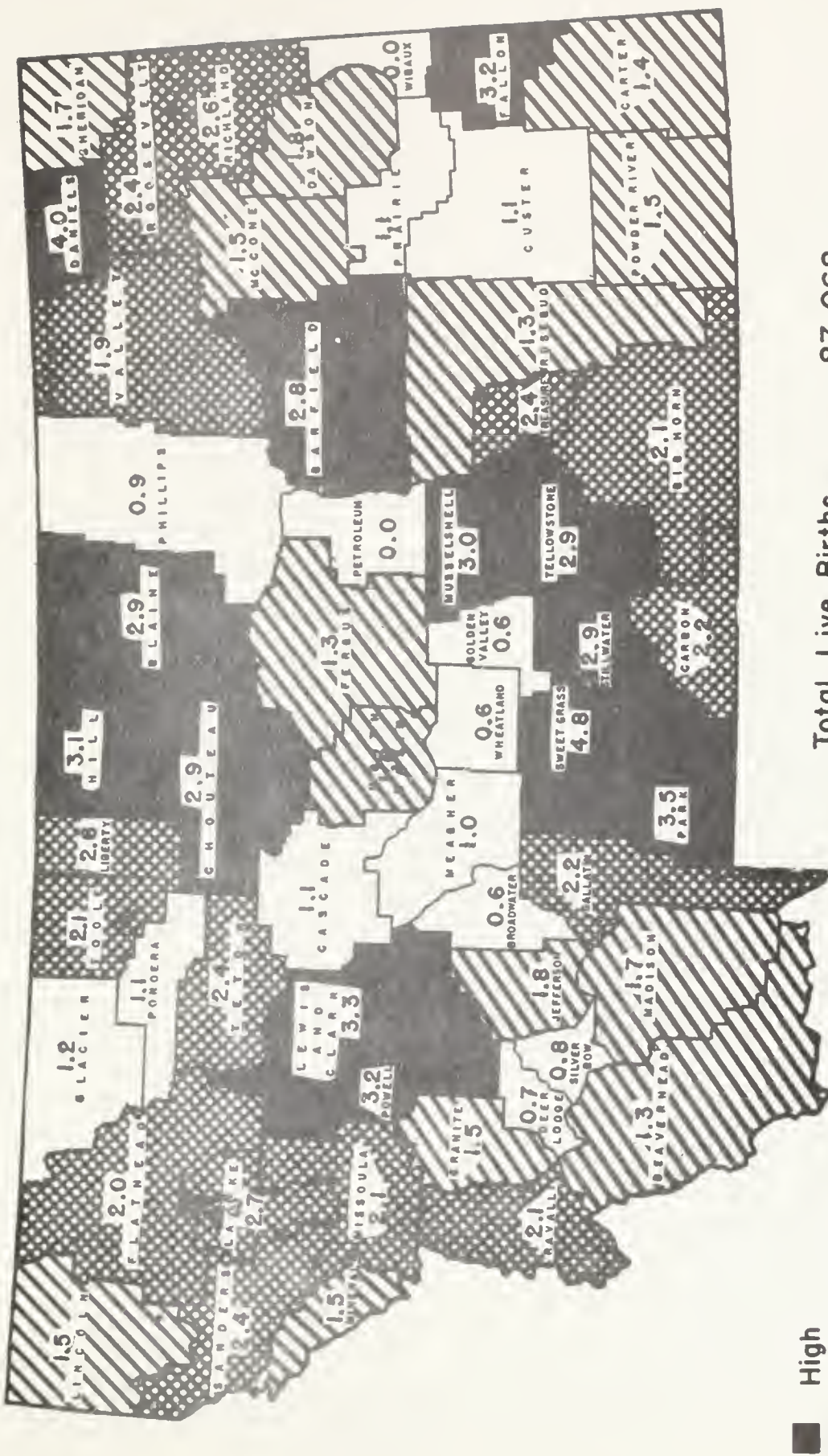
COUNTIES

	Live Births	Sections	Percent	Versions	Percent						
Beaverhead	818	12	1.4	11	1.3						
Big Horn	1,447	24	1.7	31	2.1						
Blaine	1,174	20	1.7	35	2.9						
Broadwater	338	10	3.0	2	0.6						
Carbon	785	26	3.3	17	2.2						
Carter	220	2	0.9	3	1.4						
Cascade	10,327	176	1.7	104	1.1						
Chouteau	972	19	2.0	28	2.9						
Custer	1,748	40	2.3	19	1.1						
Daniels	503	5	1.0	20	4.0						
Dawson	1,921	32	1.7	35	1.8						
Deer Lodge	2,404	87	3.7	15	0.7						
Fallon	563	13	2.3	18	3.2						
Fergus	1,744	49	2.8	23	1.3						
Flothead	4,128	123	3.0	83	2.0						
Gallatin	3,091	108	3.5	67	2.2						
Gorfield	254	1	0.4	7	2.8						
Grolier	2,051	57	2.8	25	1.2						
Golden Valley	130	4	3.1	1	0.8						
Granite	343	11	3.2	6	1.5						
Hill	2,892	37	1.2	89	3.1						
Jefferson	386	7	1.8	7	1.8						
Judith Basin	315	3	1.0	5	1.6						
Lake	1,468	45	3.1	39	2.7						
Lewis & Clark	3,343	127	3.8	112	3.3						
Liberty	427	7	1.6	11	2.6						
Lincoln	1,693	29	1.7	25	1.5						
McCone	420	11	2.6	11	1.5						
Madison	460	6	1.3	8	1.7						
Meagher	287	12	4.2	3	1.0						
Mineral	326	7	2.1	5	1.5						
Missoula	5,497	119	2.2	118	2.1						
Musselshell	574	21	3.7	17	3.0						
Park	1,270	41	3.2	44	3.5						
Petroleum	72	3	4.2	--	0.0						
Phillips	855	20	2.3	8	0.9						
Pondero	1,210	25	2.1	13	1.1						
Powder River	268	8	2.9	4	1.5						
Powell	806	20	2.5	26	3.2						
Prairie	271	2	0.7	3	1.1						
Ravalli	1,102	10	0.9	24	2.1						
Richland	1,522	59	3.9	40	2.6						
Roosevelt	1,864	17	0.9	44	2.4						
Rosebud	857	29	3.4	11	1.3						
Sanders	722	24	3.3	17	2.4						
Sheridan	832	17	2.0	14	1.7						
Silver Bow	6,714	164	2.4	51	0.8						
Stillwater	597	34	5.6	17	2.9						
Sweet Grass	353	6	1.7	17	4.8						
Teton	832	12	1.4	20	2.4						
Toole	1,119	32	2.8	24	2.1						
Treasure	202	14	6.9	5	2.4						
Valley	2,086	28	1.3	41	1.9						
Wheatland	318	13	4.1	2	0.6						
Wiboux	139	2	1.4	--	0.0						
Yellowstone	10,008	483	4.8	292	2.9						
TOTAL	87,068	2,313	2.8	1,682	1.9						

Percentage of Caesarean Sections Montana Residents 1955-1959



Percentage of Internal Podalic Versions Montana Residents 1955-1959



Total Live Births	87,068
Total Internal Versions	1,682
Percentage of Versions	1.9

High
Medium High
Medium Low
Low

TABLE 3 - 1959
CONDITIONS OF LABOR

TOTAL REPORTED FETAL DEATHS	159
Normal Labor	40
Placenta Previa	10
Abruptio Placenta	16
Other Hemorrhage	2
Prolapse of Cord	11
Breech Presentation	12
Prolonged Labor	1
No Labor	5
Not Stated	62

TABLE 4 - 1959
METHODS OF DELIVERY

TOTAL REPORTED FETAL DEATHS	159
Spontaneous	106
Low Forceps	8
Mid Forceps	2
High Forceps	1
Low Cervical Cesarean Section	6
Classical Cesarean Section	4
Other Cesarean Section	3
Breech Extraction	12
Internal Version and Extraction	2
Laparotomy for Ectopic	1
Not Stated	14

PART D - NEONATAL DEATHS

This section comprises a tabulation of deaths occurring between expulsion of the baby and 4 weeks of age.

TABLE 5 - 1959
CAUSES OF NEONATAL DEATH BY AGE OF MOTHER

	Total	14-18	19-23	24-28	29-33	34-38	39-43	44 plus	Not Stated
Prematurity, Unqualified	70	7	22	20	11	-	1	-	9
Abnormal Pulmonary Ventilation	62	5	14	14	11	5	4	1	8
Congenital Malformation	16	2	4	3	2	2	-	-	3
Birth Injury	10	1	2	3	2	-	1	-	1
Erythroblastosis	9	-	1	-	2	2	1	-	3
Pneumonia	8	-	1	1	1	-	1	-	4
Other Infections	4	-	-	2	-	1	-	-	1
Other	18	2	6	2	-	-	5	-	3
TOTAL DEATHS BY AGE OF MOTHER	197	17	50	45	29	10	13	1	32

TABLE 6 - 1959
MATERNAL CAUSE OF DEATH BY AGE OF MOTHER

	Total	14-18	19-23	24-28	29-33	34-38	39-43	44 plus	Not Stated
Premature Labor, with or without Premature Rupture of Membranes, Cause Unknown	76	6	26	15	9	2	3	-	15
Antepartum Hemorrhage	29	2	9	10	3	1	-	-	4
Multiple Pregnancy (Premature Birth)	12	-	1	5	5	-	1	-	-
Rh Sensitization	9	-	1	-	2	2	2	-	2
Infection	4	1	2	1	-	-	-	-	-
Hypertensive Toxemia	4	1	-	-	1	-	-	-	2
Malnutrition	2	-	1	-	-	-	1	-	-
Diabetes	1	-	-	1	-	-	-	-	-
Trauma	1	1	-	-	-	-	-	-	-
Surgery	1	-	-	-	1	-	-	-	-
Endocrine	1	-	-	-	-	-	1	-	-
Prolonged Labor	1	-	1	-	-	-	-	-	-
No Association	56	6	16	7	7	4	4	-	12
ALL CAUSES	197	17	57	39	28	9	12	-	35

TABLE 7 - 1959
PREMATURE BIRTH BY MATERNAL CAUSE

ALL CAUSES	NUMBER
Premature Labor (Cause Undetermined)	61
Antepartum Hemorrhage	24
Ruptured Membranes (Premature)	15
Threatened Abortion	12
Multiple Pregnancy	11
Infection	3
Rh Sensitivity	3
Malnutrition	3
Surgery	2
Polyhydramnios	2
Toxemia - Hypertensive	2
Trauma	1
Incompetent Cervical Os	1
Other	6
TOTAL	146

(Most cases listed under "Threatened Abortion" were apparently due to faulty placentation)

Montana

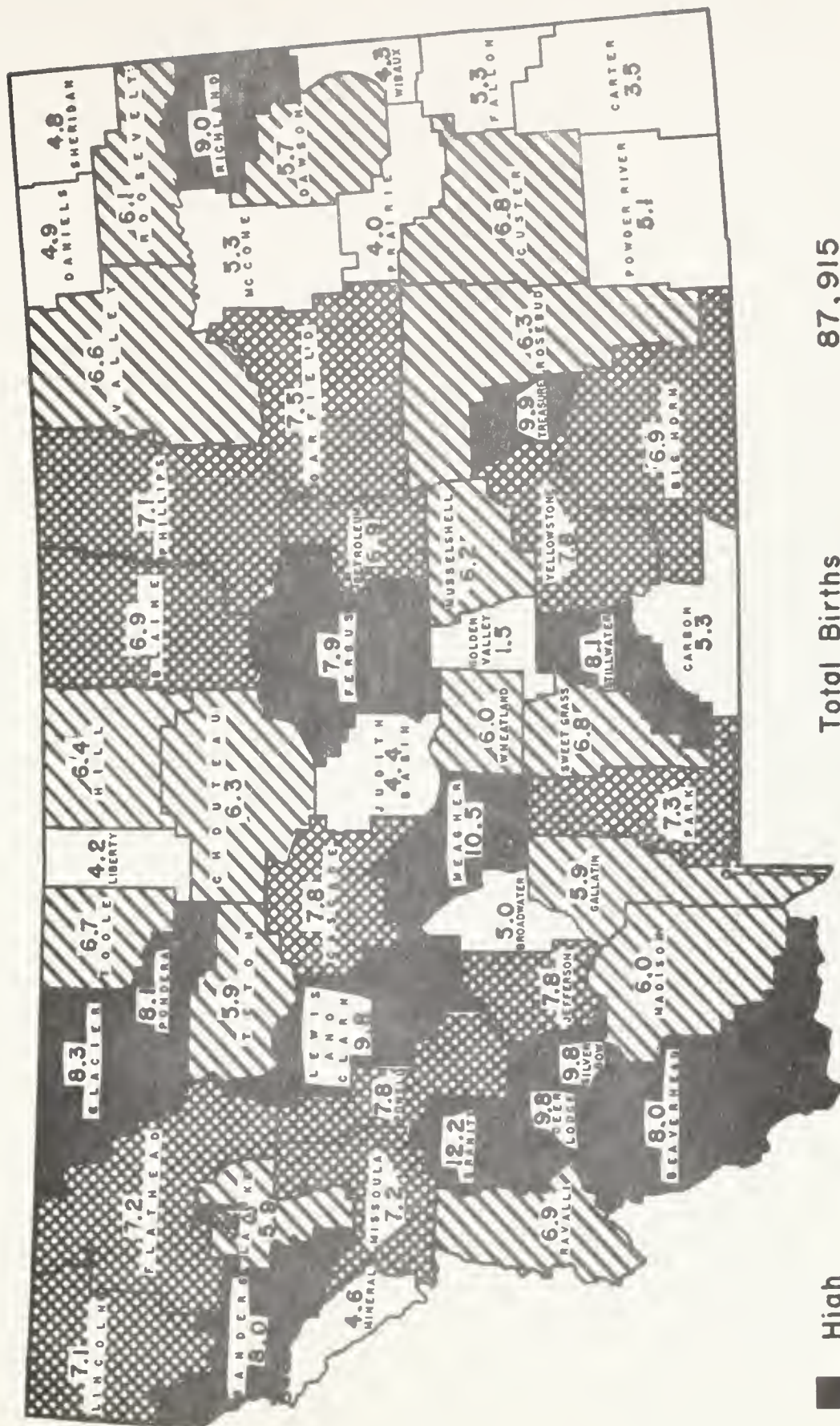
1955 - 1959

COUNTIES

1955 - 1959			
	Births	Prematures	Percentage
Beaverhead	833	67	8.0
Big Horn	1,502	104	6.9
Blaine	1,170	81	6.9
Broodwater	340	17	5.0
Carbon	790	42	5.3
Carter	263	9	3.5
Cascade	10,532	824	7.8
Chateau	975	61	6.3
Custer	1,758	120	6.8
Daniels	512	25	4.9
Dawson	1,944	111	5.7
Deer Lodge	2,416	236	9.8
Fallon	570	30	5.3
Fergus	1,749	138	7.9
Flathead	4,140	300	7.2
Gallatin	3,111	183	5.9
Garfield	255	19	7.5
Glacier	2,065	172	8.3
Golden Valley	131	2	1.5
Granite	345	42	12.2
Hill	2,903	186	6.4
Jefferson	387	30	7.8
Judith Basin	315	14	4.4
Lake	1,476	87	5.9
Lewis & Clark	3,363	331	9.8
Liberty	427	18	4.2
Lincoln	1,744	124	7.1
McCone	414	22	5.3
Madison	453	27	6.0
Meagher	277	29	10.5
Mineral	327	15	4.6
Missoula	5,521	395	7.2
Musselshell	578	36	6.2
Park	1,279	93	7.3
Petroleum	72	5	6.9
Phillips	856	61	7.1
Pondera	1,214	98	8.1
Powder River	297	15	5.1
Powell	809	60	7.4
Prairie	275	11	4.0
Ravalli	1,112	77	6.9
Richland	1,432	129	9.0
Roosevelt	1,910	117	6.1
Rosebud	877	55	6.3
Sanders	853	68	8.0
Sheridan	910	44	4.8
Silver Bow	6,731	658	9.8
Stillwater	602	49	8.1
Sweet Grass	355	24	6.8
Teton	832	49	5.9
Toole	1,122	75	6.7
Treasure	203	20	9.9
Valley	2,092	139	6.6
Wheatland	319	19	6.0
Wibaux	185	8	4.3
Yellowstone	10,036	781	7.8
TOTAL	87,915	6,553	7.5

Prematurity Percentages By Place of Residence

1955-1959



Total Births 87,915
Prematures 6,553
State Percentage 7.5

High
Medium High
Medium Low
Low

TABLE 8 - 1959
AGE AT DEATH (Neonatal)

TOTAL	197
Under one day	105
One day	25
Two days	25
Three days	9
Four to seven days	15
Eight to twenty-eight days	18

ACCESSORY FACTORS INVOLVED IN FETAL AND NEONATAL DEATHS

TABLE 9 - 1959
DEATHS FROM ERYTHROBLASTOSIS FETALIS

TOTAL Infants Reported	9
Blood Therapy	
Adequate	3
Inadequate	1
Not Stated	5

TABLE 10 - 1959
ANESTHESIA

	<u>Fetal Deaths</u>	<u>Neonatal Deaths</u>
Proper administration; proper time	69	73
Proper administration; improper time	4	4
Improper administration; proper time	5	6
Improper administration; improper time	7	9
None given	56	72
Not stated	18	33
TOTAL	159	197

TABLE 11 - 1959
AUTOPSY PERCENTAGE

	<u>Fetal Deaths</u>	<u>Neonatal Deaths</u>
TOTAL	159	197
Yes	24 - 15.1%	21 - 10.7%
No	110 - 69.2%	71 - 36.0%
Not stated	25 - 15.7%	105 - 53.3%

MONTANA FETAL AND INFANT DEATH RATES 1955 - 1959

RATES per 1,000 LIVE BIRTHS

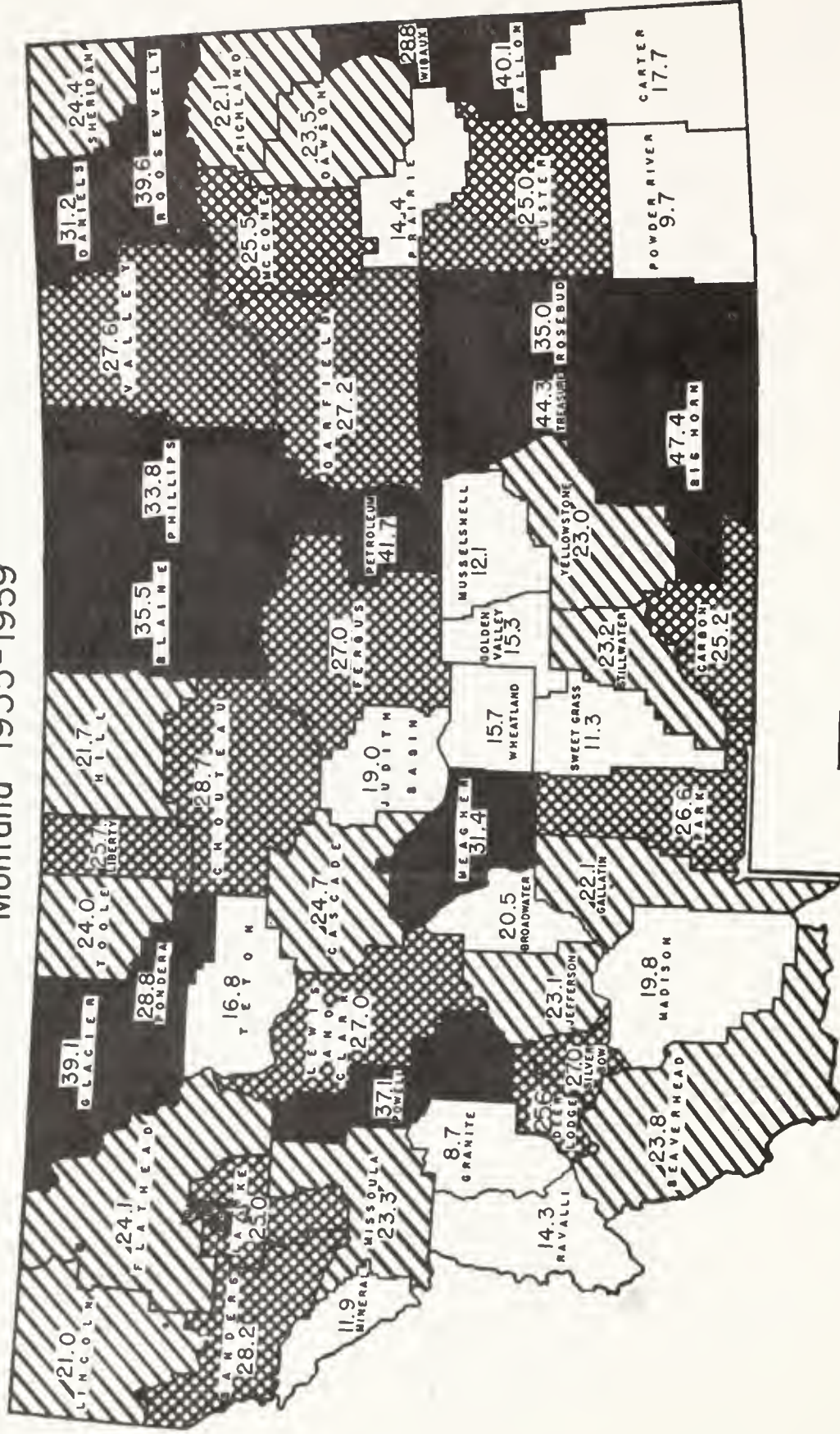
BY PLACE OF RESIDENCE

COUNTIES

COUNTIES	LIVE	FETAL	RATE	NEONATAL	RATE	INFANT	RATE
	BIRTHS	DEATHS				DEATHS	

Beaverhead	841	7	8.3	17	20.2	19	22.6
Big Horn	1,539	22	14.3	34	22.1	68	44.2
Blaine	1,182	16	13.5	26	22.0	42	35.5
Broadwater	341	4	11.7	5	14.7	7	20.5
Carbon	794	8	10.1	13	16.4	20	25.2
Carter	283	4	14.1	3	10.6	4	14.1
Cascade	10,369	128	12.3	177	17.1	252	24.3
Chouteau	975	15	15.4	22	22.6	28	28.7
Custer	1,761	17	9.7	36	20.4	43	24.4
Daniels	512	5	9.8	7	13.7	14	27.3
Dawson	1,956	20	10.2	39	19.9	46	23.5
Deer Lodge	2,419	47	19.4	52	21.5	61	25.2
Fallon	573	9	15.7	16	27.9	23	40.1
Fergus	1,750	17	9.7	28	16.0	43	24.6
Flathead	4,152	52	12.5	62	14.9	98	23.6
Gallatin	3,124	48	15.4	47	15.0	69	22.1
Garfield	257	4	15.6	5	19.5	7	27.2
Glacier	2,072	28	13.5	40	19.3	76	36.7
Golden Valley	131	--	0.0	2	15.3	2	15.3
Granite	345	2	5.8	3	8.7	3	8.7
Hill	2,906	46	15.8	46	15.8	61	21.0
Jefferson	390	1	2.6	6	15.4	9	23.1
Judith Basin	315	3	9.5	5	15.9	6	19.0
Lake	1,478	20	13.5	27	18.3	37	25.0
Lewis & Clark	3,369	45	13.4	70	20.8	90	26.7
Liberty	428	6	14.0	8	18.7	9	21.0
Lincoln	1,762	18	10.2	24	13.6	35	19.9
McCane	432	6	13.9	6	13.9	11	25.5
Madison	454	7	15.4	7	15.4	9	19.8
Meagher	287	3	10.5	7	24.4	9	31.4
Mineral	334	6	18.0	3	9.0	4	12.0
Missoula	5,527	58	10.5	92	16.6	128	23.2
Musselshell	580	9	15.5	5	8.6	7	12.1
Park	1,280	18	14.1	23	18.0	33	25.8
Petroleum	72	--	0.0	2	27.8	3	41.7
Phillips	857	9	10.5	22	25.7	29	33.8
Pondera	1,215	18	14.8	23	18.9	35	28.8
Powder River	309	6	19.4	1	3.2	2	6.5
Powell	809	17	21.0	24	29.7	30	37.1
Prairie	277	2	7.2	3	10.8	4	14.4
Ravalli	1,118	6	5.4	9	8.1	15	13.4
Richland	1,538	10	6.5	23	15.0	33	21.5
Roosevelt	1,942	39	20.1	39	20.1	73	37.6
Rosebud	886	15	16.9	19	21.4	30	33.9
Sanders	886	8	9.0	14	15.8	23	26.0
Sheridan	940	13	13.8	11	11.7	17	18.1
Silver Bow	6,737	108	16.0	138	20.5	181	26.9
Stillwater	603	8	13.3	11	18.2	14	23.2
Sweet Grass	355	2	5.6	3	8.5	4	11.3
Teton	834	12	14.4	11	13.2	14	16.8
Toole	1,125	7	6.2	17	15.1	25	22.2
Treasure	203	1	4.9	7	34.5	9	44.3
Valley	2,098	43	20.5	35	16.7	58	27.6
Wheatland	319	2	6.3	4	12.5	5	15.7
Wibaux	208	3	14.4	2	9.6	4	19.2
Yellowstone	10,048	112	11.1	171	17.0	228	22.7
TOTAL	88,297	1,140	12.9	1,552	17.6	2,209	25.0

INFANT MORTALITY RATES By Place of Residence Montana 1955-1959



High Quartile
Medium High Quartile
Medium Low Quartile
Low Quartile

Total Live Births - 87,588
Total Infant Deaths - 2,245
Rate per 1,000 Live Births - 25.6

SEDATION

The Committee feels very strongly on the relationship between the type, amount, and timing of the analgesic and/or anaesthetic agents employed and fetal respiratory depression, particularly in the premature infant.

The over-all picture of proper analgesic and anaesthetic administration during 1959 over 1958 showed a marked improvement. However, excessive medication or improper timing of administration occurred too frequently in both fetal and neonatal categories according to the opinion of the Maternal and Child Welfare Committee. In analyzing these cases, it was found that the great majority of the cases upon which excessive analgesia was administered were in premature labors, and it was felt that this was definitely a contributing cause of many an early neonatal death.

Cases must be individualized and, therefore, no hard and fast criteria can be applied to all labors and deliveries. However, it is generally accepted that in the management of a premature birth, medication should be kept at a minimum, and should not be administered within two hours of delivery. The Committee also recommends that oxygen be given to the mother during labor contractions when confronted with prematurity. The Committee heartily condemns the practice of posting standard or routine orders on labor patients for the above obvious reasons.

Largely, as a result of either improper administration or improper timing of the analgesic or anaesthetic agent, stimulants were often deemed a resuscitative measure. The Committee is of the strong conviction that stimulants are of little value and are often harmful to the hypoxic baby, particularly the premature, and, therefore, should not be used.

INTERNAL PODALIC VERSION

Data compiled by the Division of Records and Statistics of the State Board of Health reports a tremendously high incidence of versions being performed in this State. Figures show that 15.4 per 1,000 live births and 2.7% of all operative deliveries were done by internal versions. These figures may be compared with those of 1958, which recorded a rate of 16.6 per 1,000 live births and 3.5% of operative deliveries.

These figures are greatly in excess of the national average. On close scrutiny, the Committee concluded that procedures other than version would have reduced our perinatal mortality rate. The Committee recommends this procedure be abandoned, except in rare instances or in the presence of the second of twins. A five-year chart is included to show the percentage of versions by counties.

CESAREAN SECTION

The Committee found that the rate of 27.0 per 1,000 live births, and a percentage of 4.7 of all operative deliveries was quite conservative, and below the national averages. The 1958 records showed a rate of 25.9 per 1,000 live births, and 2.6% of operative deliveries. A five-year chart is included to show

The percentage of sections performed by counties. It is to be recognized that patients from several counties are referred to other areas where more adequate equipment is available for operative deliveries.

PREMATURE BIRTH

Montana's premature birth rate is rather high. This, we feel, is largely due to the relatively low socio-economic level of a large percentage of our population, especially in certain concentrated areas. It has also been noted that frequently a greater percentage of premature births have occurred in areas of higher elevation. Many of the mothers of premature babies have availed themselves of little or no prenatal care. It is felt that it is imperative that special efforts be made to educate the public to the advantages of early and adequate prenatal care, which is so essential if we are to cope with this problem of prematurity.

PUBLIC HEALTH NURSE CONTACT

There is an obvious need for community understanding that early and adequate prenatal care can prevent many of the problems which result from the patient's fears or lack of knowledge. The public health nurse can do much in this educational field and in locating pregnant women who are not under professional care. The Committee again urges that pre- and post-natal cases be referred to public health nurses, where they are available, for consultation and follow-up care.

Discussion groups for expectant mothers are held in many areas and have been enthusiastically accepted by professional personnel and laity, alike. Classes in other areas are in the formative stage. Physician referral of patients to these classes should be encouraged when possible.

AUTOPSIES

As is noted in the table on autopsy rates, it is evident that our record in Montana is very poor. In recognition of this fact, a joint meeting of the Maternal and Child Welfare Committee of the Montana Medical Association and the Montana Pathological Society was held to make recommendations to improve our autopsy rate and make our perinatal study more accurate and meaningful. The following is the gist of this meeting as reported by Arnold E. Ritt, M.D., Chairman of the Maternal and Child Welfare Committee.

"In an endeavor to interest more physicians in making post-mortem examinations on perinatal and neonatal deaths, the pathologists made the following suggestion:

'Any Montana physician doing obstetrics and/or pediatrics, and interested in the program, should contact the pathologist in his or her area, or a pathologist of his choice and make the necessary arrangements with this pathologist as to what organs or material should be sent, the manner of sending, etc. The pathologists were most generous and willing in their desire to properly assign the cause of death in newborns by 'posting'

more of these infants. As to the matter of fees for this work, it is a matter that will have to be arranged between physicians and pathologists on a personal basis. The pathologists stated that in the majority of instances, depending largely on the previous personal and professional relationship between pathologist and physician, the pathological examination would be done without charge.'

The Maternal and Child Welfare Committee of the Montana Medical Association urges all physicians who are interested in a perinatal death study, and who are interested in keeping Montana's perinatal death rate at a low figure, take advantage of the help offered by Montana pathologists, and make every effort to increase their perinatal autopsy rate."

CHANGING DIAGNOSIS ON DEATH CERTIFICATES

The cause of death obtained from the death certificate does not always agree with the cause given in the returned questionnaires. Many times this is the result of autopsy or laboratory reports received after the certificate had been filed. The death certificate can only be changed by a sworn statement from the attending physician, provided autopsy findings or further laboratory work indicates that the cause given on the death certificate was incorrect. This affidavit is to be filed with the Division of Records and Statistics, Montana State Board of Health. In the interest of accurate vital statistics in Montana (and, therefore, in the country as a whole) the Committee urges physicians to change the death certificates in this way, whenever indicated.

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SUMMARY

(1) The Committee again urges that the questionnaires be filled out more fully, in order to make our study more accurate and meaningful.

(2) The Committee urges attention to the dosage and the time of administration of medication during labor and before cesarean section. Also, that stimulants not be used for the anoxic baby, particularly the premature.

(3) The Committee urges the referral of obstetric patients to a public health nurse when there is one available.

(4) The Committee decries the excessive resort to internal podalic version.

(5) The Committee urges that physicians report any change of cause of death whenever any changes become apparent by laboratory or autopsy findings.

(6) The Committee urges that physicians redouble their efforts to obtain autopsies on all perinatal deaths.

(7) The Committee urges that every effort be made to educate the public of the advantages of early and complete prenatal care.

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